11-4-08 Application No. 10/519,681 Reply to final Office Action of August 4, 2008

IN THE CLAIMS

Claim 2 (Previously Presented): The method accord desulfurization conditions satisfy the following formula (2):

1.19×Pope 0.35 < Tope/Tso<1.68×Pope 0.24 ···(2).

Claims 7 / Claim 2 (Previously Presented): The method according to Claim 12, wherein the

Claim 5 (Previously Presented): The method according to Claim 12, wherein the metallic desulfurizing agent is a nickel-copper-based desulfurizing agent.

Claim 6 (Previously Presented): The method according to Claim 12, wherein the liquid hydrocarbon comprises at least one member selected from the group consisting of a gasoline fraction, a kerosene fraction, and a gas oil fraction.

Claims 7-11 (Cancelled).

Claim 12 (Previously Presented): A method for producing a desulfurized liquid hydrocarbon, comprising:

identifying distillation characteristics of a liquid hydrocarbon;

selecting desulfurization conditions based on the distillation characteristics of the liquid hydrocarbon; and

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contacting the liquid hydrocarbon with a metallic desulfurizing agent under the desulfurzation conditions to obtain the desulfurzed liquid hydrocarbon;

wherein:

selecting the desulfurization conditions comprises selecting conditions satisfying the following formula (1):

$$1.06 \times P_{opc}^{0.44} < T_{opc} / T_{50} < 1.78 \times P_{opc}^{0.22}$$
 (1)

wherein

Tope represents operation temperature in °C;

Pope represents operation pressure in MPa; and

 T_{50} represents a temperature per 50 percent recovered as determined by the "test method for distillation at atmospheric pressure" provided in the standard JIS K2254 "Petroleum products – Determination of distillation characteristics" as revised in 1998.

Claim 13 (Currently Amended): The method according to Claim 12, wherein:
hydrogen addition is not employed while removing sulfur content; and
the metallic desulfurizing agent eemprises includes a porous inorganic oxide and a
metallic element eemprising including at least nickel (Ni) supported on the persus inorganic
exidethereon.